Doc Code: AP.PRE.REQ

PTO/SB/33 (07-09)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)	
FM-269J	

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on November 25, 2009

Signature Crystal A. Eastman

Typed or printed name Crystal A. Eastman

Application Number	Filed
10/804,730	March 19, 2004
First Named Inventor	
Brian Farrell	
Art Unit	**Examiner**
3765	Worrell, Jr., Larry D.

Applicant requests review of the ~~final~~ rejection in the above-identified application. ~~No~~ amendments are being filed ~~with this request~~ separately to address §112, second paragraph rejections.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)
- ☑ attorney or agent of record. Registration number 47,136
- ☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

T. Thompkins
Signature

Thomas E. Thompkins, Jr.
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(781) 890-5678
Telephone number

11-25-09
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Farrell et al.	Group:	3765
Serial No:	10/804,730	Examiner:	Worrell, Jr., Larry D.
Filed:	March 19, 2004	Docket No:	FM-269J
For:	ELECTRICALLY ACTIVE TEXTILE ARTICLE		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF EXPRESS MAILING

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Crystal A. Eastman

REASONS IN SUPPORT OF THE PRE-APPEAL BRIEF REQUEST FOR REVIEW

The applicants appreciate the Examiner's thorough examination of the application and request reexamination and reconsideration of the application in view of the following remarks. The Examiner's rejections in the subject patent application are legally deficient. The reasons herein are presented in support of applicants' Pre-Appeal Brief Request for Review which is being filed simultaneously herewith. The applicants also refer to the previously-filed Responses in this patent application for further support.

REMARKS

Claims 1, 3-6, 9, 11-14 and 26 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Pat. No. 6,420,008 to *Lewis et al.* in view of U.S. Pat. No. 6,785,144 to *Akram* and further in view of U.S. Pat. No. 6,412,701 to *Kohama et al.* Claims 10 and 28 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Lewis* in view of *Akram* in view of *Kohama* and further in view of U.S. Pat. No. 4,774,434 to *Bennion*. Claims 7, 8, 15-23 and 25 stand withdrawn.

In claim 1 the applicants claim an electrically active textile article including a fabric, and a flexible circuit including traces and pads on a flexible substrate. The substrate is welded onto the fabric surface by ultrasonic welding or radio frequency processes. At least one electronic component populates the circuit.

U.S. Pat. No. 6,420,008 to *Lewis et al.* teaches a sticky flexible sheet 12, which is sticky on the back, and which is covered by a peel off backing 20. *Lewis* teaches a separate PC board 14. The PC board 14 sticks to one side of the sticky flexible sheet 12. The sticky flexible sheet 12 then sticks to a shirt, for example.

In sharp contrast to the applicants' independent claim 1, *Lewis*'s sticky flexible sheet 12 is not the substrate of a flexible circuit board.

Moreover, *Lewis*' PC board itself does not adhere to the shirt. In fact, virtually everything but *Lewis*' PC board adheres to the shirt.

Thus, *Lewis* fails to teach adhering the PC board itself to the shirt.

Additionally, *Lewis* fails to teach that the sticky sheet or PC board are welded to the shirt, also in contrast to the applicants' claim 1.

Lewis goes even further, however, by teaching that permanent affixation of displays to clothing, or requiring modifications of the clothing, are essentially negative qualities which must be improved upon.

Consequently, *Lewis* teaches the ready removability of its display sticker. See e.g. *Lewis* column 1, lines 59-63; column 2, lines 40-44.

In summary, *Lewis* fails to teach the applicant's claimed structure. Further, *Lewis* teaches away from the applicants' claimed structure. See also MPEP §2104.02 VI (PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS).

The secondary cited reference U.S. Pat. No. 6,412,701 to *Akram* does not overcome the deficiencies in the teachings of *Lewis*.

Akram fails to teach welding, and fails to teach welding a substrate of the printed circuit board to a fabric. Simply adding the conductive paths and circuit traces disclosed by *Akram* to *Lewis*' PC board fails to teach the applicant's invention which, when structured as claimed, acts as a viable improvement to the previously known garments with conductive fibers integral with the fabric or garments with rigid, bulky and uncomfortable circuit boards.

The tertiary cited reference *Kohama* also fails to overcome the deficiencies in the teachings of *Lewis* and *Akram*.

Kohama teaches a different device, in a different field of endeavor, to solve a different problem, than the structure claimed or problem solved by the applicant. Also, *Kohama*, even in (improper) combination with *Lewis*, fails to teach the applicants' claimed structure.

Lewis and *Kohama* do not teach the same or similar devices. *Lewis* and *Kohama* are not in the same field of endeavor. Moreover, *Lewis* and *Kohama* do not solve the same problem.

Lewis discloses a sticky sheet which sticks to a shirt for ready removal therefrom. A PC board is attached to the sticky sheet. The sticky sheet is attached to a shirt. *Lewis* declares a solution which sticks a display to a shirt without permanently affixing it to the shirt and without modifying the shirt. See *Lewis* and, e.g., the discussion of *Lewis* above.

In contrast to the applicant's claims, and in contrast to *Lewis* with which it is combined, *Kohama* teaches ways to make contactless IC cards as substitutes for cash cards, drivers' licenses, and telephone cards. *Kohama* teaches alleged improved ways to simplify production steps and reduce costs. See e.g. *Kohama* at column 1, lines 16-22.

Kohama fails to teach that such contactless IC cards are connected to clothing, for example. *Kohama* teaches that the non-woven fabric layers themselves are the so-called substrate. See e.g. *Kohama* column 10, lines 26-27. *Kohama* further fails to teach an improvement over garments with conductive fibers integral with the fabric, or garments with rigid, bulky and uncomfortable circuit boards.

Even the Supreme Court's *KSR International* case did not go so far as to hold that elements in the prior art can be considered in a vacuum. **A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art**. See e.g. *KSR International Co. v. Teleflex, Inc.*, 82 USPQ 2d 1385, 1396 (U.S. Supreme Court 2007) (with emphasis added).

Moreover, the applicants submit that *KSR International* does not stand for the proposition that anything under the sun can be considered in hindsight after consideration of the applicants' claims. "**A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning**". *KSR International, supra* at 1397 (with emphasis added).

In summary, given the diverse technical fields of *Lewis* and *Kohama*, and the dissimilarity of the devices taught, and the separate and unrelated problems to be solved, that the combination of *Lewis* and *Kohama* is without basis in law, and the use of (improper) hindsight reasoning to form the rejections is clear. *Lewis* is not properly combinable with *Kohama*. Moreover, even their improper combination fails to teach the applicants' claimed elements.

Moreover, not only does *Kohama* teach an unrelated device, in an unrelated field, solving an unrelated problem, *Kohama* in fact teaches that IC chip 1 and coil 2 are embedded in the flexible substrate 3. See e.g. *Kohama* column 2, lines 57-65.

This teaching by *Kohama* is in sharp contrast to the applicants' claim 1, which includes the recitation of a flexible circuit welded onto a fabric surface.

Additionally, *Kohama* fails to teach that any part of the substrate is welded at all.

Instead, *Kohama* teaches that it is the wires embedded in the substrate which are welded, in order to electrically connect the wires with each other. See e.g. *Kohama* column 13, line 61 – column 14, line 4, and column 15, lines 3-14; column 3, lines 56-62; column 9, lines 4-12.

Also, in alternative embodiments, *Kohama* teaches: (a) solder or gold bumps, e.g. 1b, 1d melted to attach coil 2 to the chip, or to melt the coil to input or output terminals; (b) hot pressing of IC chip 1 between first and second non-woven fabric 12 and 13, wherein the chip 1 is typically embedded, and the wires are welded, e.g. to connect output terminals and end portions of the coil (the latter two features as noted above). See e.g. *Kohama*

column 9, lines 26 – column 10, line 26 and Figs. 1-7; Figs. 11A-11D and 12A-12D and description. Figs. 13A-15 are similar, and Figs. 16 and 17 show utilization of hot rollers and the like.

In short, none of *Kohama*'s embodiments teach the elements of applicants' claim 1, and in fact teach away from the applicants' claimed combination of elements in many respects. See also MPEP §2141.02 I. (THE CLAIMED INVENTION MUST BE CONSIDERED AS A WHOLE).

The Examiner also cites U.S. Pat. No. 4,774,434 to *Bennion* as disclosing a protective covering, and combines it with *Lewis*.

Bennion fails to teach welding at all, however, or welding a substrate to a fabric, or a covering welded onto a fabric surface over the flex circuit. Neither circuit board 10 nor substrate 11 are welded to a fabric. *Bennion*'s covering 40 is not welded to the shirt. These teachings by *Bennion* are in contrast to the applicants' claim 1 and the applicants' independent claim 26.

Moreover, *Lewis* specifically teaches alleged disadvantages of systems such as *Bennion*'s, thus discrediting or discouraging such a system. See e.g. *Lewis* at column 2, lines 10-27.

The applicant submits that since *Lewis* discredits the teachings of *Bennion*, those skilled in the art would not be led to add teachings of *Bennion* to teachings of *Lewis*.

CONCLUSION

In summary, the cited reference *Lewis* fails to teach the applicants' claimed structure which includes a flexible circuit flexible substrate welded onto a fabric surface. Further, *Lewis* teaches away from permanently affixing displays to clothing or modifying the clothing.

Akram also fails to teach such features.

Kohama teaches a different device, in a different field, and a solution to different problems, than those claimed by the applicants or taught by *Lewis*, making it an improper reference, and its combination with *Lewis* improper.

Further, *Kohama* fails to teach welding a substrate at all, and fails to teach welding a substrate onto a fabric. Instead, *Kohama* teaches components embedded in a substrate, and welding of wires only or melting fabric only.

Bennion teaches a covering which is not welded at all, nor is it welded to a fabric. Moreover, *Lewis*, with which *Bennion* is combined, specifically discredits *Bennion*. Thus the combination *Bennion* with *Lewis* is improper.

The applicants' independent claims 1 and 26 have been discussed above. Claims 3 and 5-23 depend directly or indirectly from claim 1. Independent claim 28 includes features similar to claim 1. The applicant has simultaneously filed – under separate cover – amendments to claims 4 and 5 to address the Examiner's §112, 2nd

paragraph rejections.

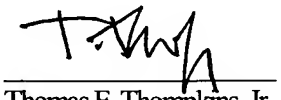
Thus, each of Examiner's rejections has been addressed or traversed.

Accordingly, it is respectfully requested that the rejections be withdrawn, and it is respectfully submitted that the application is in condition for allowance.

Early and favorable action is also respectfully requested.

If for any reason this Pre-Appeal Request for Review is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned or his associates, collect in Waltham, Massachusetts at (781) 890-5678.

Respectfully submitted,



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